



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D350-561-241
Job Sheet 178118



003713

Part No: D350-561-241

Job Qty: 1 ea

Part Name: Single Mirror Installation LH



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 5/26/18

Job Tracking No:

Due Date: 6/22/18

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG REV A IPP revA 11.07.12 new issue EC verified by:JLM

Ship Via:

DAS 10 9-89
DAS 21 9-89
See attached
JUN 10 7 2018

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea		6/22/18	0.00	0.00	Start Up Stores/Pkg-2		
105	Packaging	1 pcs		6/22/18	0.00	0.00	Packaging1-3		
110	QC	1 pcs		6/22/18	0.00	0.00	QC4		
115	DC	1 pcs		6/22/18	0.00	0.00	DC		
120	Packaging	1 pcs		6/22/18	0.00	0.00	Packaging1		
130	QC21-FG	1 Ea		6/22/18	0.00	0.00	QC21		

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
AN3-5A	Bolt	6 Ea (6 ea)	90-Start up Operation	5041106-1
AN3-6A	Bolt	1 Ea (1 ea)	90-Start up Operation	5048402
AN4-10A	Bolt	1 Ea (1 ea)	90-Start up Operation	FM137412-0
AN4-5A	Bolt	3 Ea (3 ea)	90-Start up Operation	5027725
D2011-101	Mirror 6"	1 Ea (1 ea)	90-Start up Operation	5072452
D2012-106	Arm	1 Ea (1 ea)	90-Start up Operation	7105113
D2012-107	Clevis	1 Ea (1 ea)	90-Start up Operation	50409107
D2012-111	Bracket	1 Ea (1 ea)	90-Start up Operation	7158852
D2012-115	Bracket, Clevis	1 Ea (1 ea)	90-Start up Operation	7157221
D2022-101	Spacer	2 Ea (2 ea)	90-Start up Operation	5059045
D3629-1	Bracket	1 Ea (1 ea)	90-Start up Operation	5061078
D3635-1	Gasket	1 Ea (1 ea)	90-Start up Operation	7145041
D3646-2	Arm	1 Ea (1 ea)	90-Start up Operation	7105780
D3646-4	Arm	1 Ea (1 ea)	90-Start up Operation	7115775
D4070-041	Clamp	2 Ea (2 ea)	90-Start up Operation	5054921 X 1 5072739
MS21042L3	Nut	4 Ea (4 ea)	90-Start up Operation	5075328
MS21042L4	Nut	4 Ea (4 ea)	90-Start up Operation	5056039
NAS1149D0363J	Washer	8 Ea (8 ea)	90-Start up Operation	5015269
NAS1149D0463J	Washer	8 Ea (8 ea)	90-Start up Operation	5055952

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	AN3-5A	6	304	0
	AN3-6A	1	175	0
	AN4-10A	1	49	0

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																												
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																																													
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																																													
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																																													
Large Fab ☐	Composite ☐	Supplier ☐																																														
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval																																												
Description Work Order Deviat		Disposition		Completed By																																												
Dart Aerospace Ltd. 1270 Aberdeen Street Newbury, ON K6A 1K7 CANADA TEL: 1 613 632-5200 Email: sales@dartaero.com www.dartaerospace.com Date: 06/20/18 Container No: S082493 Part: D350-561-241 Job No: 178118 Serial No/Batch: S082493 Revision: Inspector: Exp Date: Instructions:				hand / Supervisor Approval Verification																																												
				QC / QA Coordinator Approval																																												
Root Cause <table style="width:100%; border: none;"> <tr><td style="border: none;">Environment ☐</td><td style="border: none;">No Re-verification ☐</td></tr> <tr><td style="border: none;">Design ☐</td><td style="border: none;">Operator ☐</td></tr> <tr><td style="border: none;">Doc/Data ☐</td><td style="border: none;">Offset/Setup ☐</td></tr> <tr><td style="border: none;">Equip/Tooling ☐</td><td style="border: none;">Supplier ☐</td></tr> <tr><td style="border: none;">Handling/Pre ☐</td><td style="border: none;">Training ☐</td></tr> <tr><td style="border: none;">Material ☐</td><td style="border: none;">Use for Testing ☐</td></tr> <tr><td style="border: none;">Internal Transport ☐</td><td style="border: none;">Poor Information ☐</td></tr> <tr><td style="border: none;">Tribal Knowledge ☐</td><td style="border: none;">Rushing ☐</td></tr> <tr><td style="border: none;">LOA ☐</td><td style="border: none;">Product Improvement ☐</td></tr> <tr><td style="border: none;">Substation ☐</td><td style="border: none;">Process Improvement ☐</td></tr> <tr><td style="border: none;">Past Expiry Date ☐</td><td style="border: none;">Manufacturing Process ☐</td></tr> <tr><td style="border: none;">Misidentified ☐</td><td style="border: none;">Past Due ☐</td></tr> </table>		Environment ☐	No Re-verification ☐	Design ☐	Operator ☐	Doc/Data ☐	Offset/Setup ☐	Equip/Tooling ☐	Supplier ☐	Handling/Pre ☐	Training ☐	Material ☐	Use for Testing ☐	Internal Transport ☐	Poor Information ☐	Tribal Knowledge ☐	Rushing ☐	LOA ☐	Product Improvement ☐	Substation ☐	Process Improvement ☐	Past Expiry Date ☐	Manufacturing Process ☐	Misidentified ☐	Past Due ☐	<table style="width:100%; border: none;"> <tr><td style="border: none;">☐ Pr</td><td style="border: none;">Positioned Wrong</td></tr> <tr><td style="border: none;">☐ B</td><td style="border: none;">Outside Dimensions</td></tr> <tr><td style="border: none;">☐ C</td><td style="border: none;">Over/Under tolerance</td></tr> <tr><td style="border: none;">☐ C</td><td style="border: none;">Part Incorrect</td></tr> <tr><td style="border: none;">☐ C</td><td style="border: none;">Part Lost/Missing</td></tr> <tr><td style="border: none;">☐ C</td><td style="border: none;">Part Moved</td></tr> <tr><td style="border: none;">☐ C</td><td style="border: none;">Drawing</td></tr> <tr><td style="border: none;">☐ C</td><td style="border: none;">Finish</td></tr> <tr><td style="border: none;">☐ C</td><td style="border: none;">Misread</td></tr> <tr><td style="border: none;">☐ C</td><td style="border: none;">Turning Sequence</td></tr> </table>			☐ Pr	Positioned Wrong	☐ B	Outside Dimensions	☐ C	Over/Under tolerance	☐ C	Part Incorrect	☐ C	Part Lost/Missing	☐ C	Part Moved	☐ C	Drawing	☐ C	Finish	☐ C	Misread	☐ C	Turning Sequence
Environment ☐	No Re-verification ☐																																															
Design ☐	Operator ☐																																															
Doc/Data ☐	Offset/Setup ☐																																															
Equip/Tooling ☐	Supplier ☐																																															
Handling/Pre ☐	Training ☐																																															
Material ☐	Use for Testing ☐																																															
Internal Transport ☐	Poor Information ☐																																															
Tribal Knowledge ☐	Rushing ☐																																															
LOA ☐	Product Improvement ☐																																															
Substation ☐	Process Improvement ☐																																															
Past Expiry Date ☐	Manufacturing Process ☐																																															
Misidentified ☐	Past Due ☐																																															
☐ Pr	Positioned Wrong																																															
☐ B	Outside Dimensions																																															
☐ C	Over/Under tolerance																																															
☐ C	Part Incorrect																																															
☐ C	Part Lost/Missing																																															
☐ C	Part Moved																																															
☐ C	Drawing																																															
☐ C	Finish																																															
☐ C	Misread																																															
☐ C	Turning Sequence																																															
OTHER : _____		<table style="width:100%; border: none;"> <tr><td style="border: none;">☐ Cuts</td><td style="border: none;">Cut Too Short</td></tr> <tr><td style="border: none;">☐ Crushing</td><td style="border: none;">Instructions Incomplete/Unclear</td></tr> <tr><td style="border: none;">☐ Heat Treat</td><td style="border: none;">Drill Holes</td></tr> <tr><td style="border: none;">☐ Wave/Twist in Tube</td><td style="border: none;">Misaligned/off center</td></tr> <tr><td style="border: none;">☐ Marks/Chatter</td><td></td></tr> </table>			☐ Cuts	Cut Too Short	☐ Crushing	Instructions Incomplete/Unclear	☐ Heat Treat	Drill Holes	☐ Wave/Twist in Tube	Misaligned/off center	☐ Marks/Chatter																																			
☐ Cuts	Cut Too Short																																															
☐ Crushing	Instructions Incomplete/Unclear																																															
☐ Heat Treat	Drill Holes																																															
☐ Wave/Twist in Tube	Misaligned/off center																																															
☐ Marks/Chatter																																																

AN4-5A	3	58	0
D2011-101	1	18	0
D2012-106	1	23	0
D2012-107	1	49	0
D2012-111	1	3	0
D2012-115	1	19	0
D2022-101	2	47	0
D3629-1	1	6	0
D3635-1	1	3	0
D3646-2	1	9	0
D3646-4	1	5	0
D4070-041	2	17	0
MS21042L3	4	1,322	0
MS21042L4	4	2,684	0
NAS1149D0363J	8	2,848	0
NAS1149D0463J	8	6,062	0

Part Specifications

Specifications could not be found.

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : ☐					

5. PARTS LIST

Qty -041	Qty -043	Qty -045	Qty -141	Qty -143	Qty -241	Qty -243	Part Number	Description
X	1						D350-561-041	SINGLE MIRROR INSTALLATION, RH
	X						D350-561-043	DUAL MIRROR INSTALLATION, RH
	1	X		1		1	D350-561-045	MIRROR KIT
			X	1			D350-561-141	SINGLE MIRROR INSTALLATION, RH
				X			D350-561-143	DUAL MIRROR INSTALLATION, RH
					X	1	D350-561-241	SINGLE MIRROR INSTALLATION, LH
						X	D350-561-243	DUAL MIRROR INSTALLATION, LH
1		1	1		1		D2011-101	Mirror
1							D2012-101	Arm
1							D2012-103	Arm
1			1				D2012-105	Arm
					1		D2012-106	Arm
2			1		1		D2012-107	Clevis
1							D2012-109	Bracket
1			1		1		D2012-111	Bracket
4		2					D2012-113	Clamp
1			1		1		D2012-115	Bracket
4			2		2		D2022-101	Spacer
4							D2856-100-325	Abrasion Strip
1*		1*	1*		1*		D3014-1	Locknut
			1		1		D3629-1	Bracket
			1		1		D3635-1	Gasket
		2					D3635-3	Gasket
			1				D3646-1	Arm
					1		D3646-2	Arm
			1				D3646-3	Arm
					1		D3646-4	Arm
			2		2		D4070-041	Clamp
2							AN3-4A	Bolt
2		2	6		6		AN3-5A	Bolt
1			1		1		AN3-6A	Bolt
2			1		1		AN4-10A	Bolt
3			3		3		AN4-5A	Bolt
14		4	8		8		AN960JD10	Washer
9		2	8		8		AN960JD416	Washer
1*		1*	1*		1*		AN960JD416L	Washer
5		2	4		4		MS21042L3	Nut (or MS21042-3)
5			4		4		MS21042L4	Nut (or MS21042-4)

*INCLUDED AS PART OF D2011-101 MIRROR

✓ R =

PAGE 1 OF 1

Part Number: D350-561-241

Description: SINGLE CARGO MIRROR INSTALLATION, LH

[illegible]

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								